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Forward

**SOLID WASTE
MANAGEMENT BUREAU**
Division of Environmental Sciences
Montana State Department of Health
and Environmental Sciences

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THE NEW ROLE OF SOLID WASTE MANAGERS

At one time, the problem was simply how to get rid of garbage. Generally, the solution was to dump it on the ground and burn it. As populations and land values grew, it became apparent this was not the best answer. Rats infested dumps and adjacent areas, uncontrolled industrial wastes leached into water sources making them unhealthy and the resulting smoke was a noxious nuisance.

It wasn't until 1965 that awareness of these public health problems forced Congress to pass the Solid Waste Management Act. The Act's primary concern was the conversion of open dumps into sanitary landfills. Similar state legislation which followed gave Montana's Department of Health responsibility for enforcing its provisions.

By 1970, rapidly developing technologies in the field led to recognition at the national level that there were alternatives to burying garbage and wastes. More and more industries were interested in recycling used materials. The potential for burning waste to produce energy was being explored. Production of new products from refuse was being investigated. Congress responded by making monies available in the Resource Recovery Act of 1970 for research and demonstration projects.

The management of solid waste no longer consisted of just public health concerns. It included concern for environmental impacts and energy consumption as well. In 1975, the Montana legislature appropriated money for a study of the potential of resource recovery in the state, identification of markets for recyclable materials and economically practical solid waste management systems for area-wide consolidation of refuse. This information, as well as new state and federal legislation, is changing the role of the Solid Waste Management Bureau, a part of the Montana Department of Health and Environmental Sciences, created in 1974.

Previously, the Bureau's responsibilities included enforcing sanitary landfill regulations, administering the junk vehicle program and assisting in the cooperative disposal of hazardous wastes. As the definition of solid waste management has changed in the past decade, so have the duties of the Bureau.

Local governments are recognizing these changes and requiring new kinds of assistance. The seven staff members of the Bureau must be knowledgeable about innovations in solid waste management. They must be ready with specific technical advice or prepared to offer alternative solutions to local problems. The Bureau must be a clearing house with information about programs which have succeeded in other cities or states as well as providing a means for intercommunity exchange in the state.

And, changes in the field are still rapidly occurring. Traditionally, waste management was thought of in terms of taking care of it after it was created; not in terms of dealing with it before it was collected. Now the concepts of source reduction (reducing the amount of waste generated) and source separation (separating waste at its source for recycling) are emerging. Practical applications of these ideas are being closely watched by the Bureau for possible recommendation to local governments.

Because the management of solid waste is the responsibility of local government, decisions such as whether collection will be a private or public function, the need, location or future

use of a sanitary landfill, or whether to implement additional operations such as transfer stations, area-wide collection and disposal, or recycling programs are made by city and county officials. The state's new role is to provide technical assistance and information, recommendations and guidelines to help those decisions be the best possible.

TERRY'S MAIL BOX

Dear Terry,

Now that the new Solid Waste Management Act has passed the legislature and the Bureau has the responsibility for developing a state-wide plan, what are you going to do next?

Signed: Interested Legislator

Dear Interested,

Very simple: we're going straight to the people. We may have the responsibility for developing the plan but as you well know, a plan is no good unless it is going to be implemented. Local governments will have the responsibility for implementing the plan for their area so they must be an integral part of the planning.

I learned from the legislature that many people and local officials resent the Bureau's attempts to enforce a ten-year-old state law which requires open dumps to be converted into sanitary landfills. But they underestimate the potential damage to public health from such dumps and the direct damage to the environment. We are all too aware of these problems and we would rather help communities solve the complex issues of waste management and not have to enforce proper activities.

Our new role in this business of solid waste management calls for a greater amount of communication, education and understanding. We must become better teachers, listeners and communicators. To me, this is what this legislation means.

Dear Terry,

As a county official, I have watched the progress of the new Solid Waste Management Act very closely and I'm very happy the legislature passed it. Our community is anxious to solve some of its solid waste problems and we would like to get started on some long range planning as soon as possible. When will the state planning guidelines be available and what can we work on right now?

Signed: Ready - To - Act

Dear Ready,

We do not expect the final adoption of the state plan until early fall. While we are meeting with people and holding a series of public hearings prior to final approval, there is a great deal you can do.

First, you can begin by determining the exact nature of your problems including your current operations, anticipated growth of your area, and the amounts and kinds of solid waste.

Secondly, you should study the available technologies as possible alternative solutions.

Third, I would strongly suggest that you begin conversations with neighboring city and county officials to assess mutual problems and the potential areas of cooperation.

Finally, we will need your comments during this development stage of the state plan. We will look forward to your attendance at our public hearings because the plan will only be as good as the involvement we get from people like you.

Thank you for your interest.

Sincerely,
Terry Carmody, Chief
Solid Waste Management Bureau

TECHNICAL NOTES

► Rapid Rail Update

When Forward's October issue reported the success of Laurel's new Rapid Rail collection system, only one question remained: "Would the polyethylene containers stand a Montana winter?" The answer is "Yes," says Dick Metzger, Laurel's director of maintenance. "There was no cracking of the material, no frozen garbage clinging to the containers, no problems." Metzger also reports that city officials from Wolf Point recently visited Laurel to gather information prior to implementing the system in their community. Wolf Point will be the state's second town to consider this "better idea" for collection.

► Recycling — The Nitty Gritty

Private and public recycling efforts came into the forefront in the early 1970's throughout the United States. One of these was the advent of a recycling center in Missoula started by Doug Stewart and Mark Richlen for beverage cans and bottles. Since then, they have expanded the operation into Great Falls, Butte and Billings and included collection of waste paper. Montana Recycling, Inc. employs more than 30 part and full time persons and has a substantial investment in equipment and facilities.

While Mark remains enthusiastic about the business, he is realistic about the problems the enterprise has faced. He says there are two kinds of people interested in recycling: the idealist who is concerned with saving energy and natural resources and thinks recycling is the answer, and those who recognize it as a "nitty gritty" business of handling dirty garbage and, with some materials such as scrap metal, potentially dangerous. Also, Mark points out, unless the public wants to subsidize a recycling effort with tax dollars, it has to be a sound economic venture and this is the area in which the major problems arise.

In the first place, there are major tax and rate disparities between scrap and raw materials. For instance, on a national average it costs \$4.20 more per ton to ship waste paper than it does to ship paper pulp according to the Paper Stock Institute. Because of Montana's distance to markets, transportation would still be a problem even if the rates were equal. On a delivered price basis, transportation takes a large percentage of any profits, particularly with paper. Depletion allowances for raw materials are another inequity Mark cited.

And then there are market prices. Although aluminum has remained at a fairly stable price, paper prices have fluctuated greatly. As an example, Mark explained that in late 1973—early 1974 the price for computer cards dropped from \$200/ton on the coast to \$60/ton and he couldn't afford to ship them at that price.

The cost of equipment needed for recycling in this region is more expensive also. Montana Recycling, Inc. recently purchased a high-density paper baler because of the necessity of shipping a compact, full load while businesses close to the markets can use balers costing considerably less.

Mark says his business has not noted any lack of public interest in recycling. In 1975, it collected 36 million cans and last year, 42 million were brought to the recycling centers.

"Anyone wanting to get into the business has a lot to learn," Mark says. He cites such areas as keeping track of prices, handling materials and knowing the requirements for packaging, sorting, grading, and shipping. Determining the kind of equipment and collection methods are two other decisions which require careful consideration and lots of information.

In spite of these problems, Mark launched into an enthusiastic discussion about Montana Recycling's future plans. One might say he's realistically idealistic.

► Capital Complex Recycles Paper

A paper recycling program for all state agencies in the Capital Complex started in June 1974. Recyclable paper includes computer data cards, computer printouts, bond paper and newsprint. Paper which is not accepted includes all kinds of carbon paper and slick (magazine) paper. Agency personnel separate the recyclable paper for regular pick up by the Department of Administration messengers while on their scheduled routes and the paper is sold by competitive bids.

Since the program began, a total of 687,906 lb of mixed paper and 99,877 lb. of cards has been sold for \$10,140.66. Although this is a small program compared to those in larger communities, the amount recycled saved enough energy to heat nearly 40 homes for an entire year compared with the energy required to manufacture paper from wood.

► Recycling Waste Oil — A Potential for Montana?

The West Virginia Department of Highways' successful motor-oil recycling program begun seven months ago is saving the state money while protecting the environment from pollutants. Used oil is collected on a regular schedule from the highway department garages which service the state's 4,600 vehicles and from participating county school bus garages. When the 5,000 gallon mark is reached the used oil is pumped into a tanker and transported to a re-refining company near Chicago. The tanker returns with re-refined oil which is re-distributed in 55 gallon drums to the collection points. The department does not sell or supply re-refined oil outside the "closed loop" operation.

The department which uses about 30,000 gallons of oil a year is saving .429 per gallon by using re-refined oil. The oil has been analyzed and found to be similar to new motor oil and officials report its use has not impaired the efficiency of the state's vehicles in any way.

Montana's Solid Waste Management Bureau is studying the potential of a state-wide motor oil recycling program. Approximately 2,000,000 gallons of motor oil is sold in the state of which 1,320,000 gallons is disposed of in trash collections, used on roads for dust suppression or placed directly into landfills. With these disposal methods, the oil can eventually find its way into underground water sources and pollute the state's water supplies.

Two firms in the state are processing waste oils. The Comet Oil Refinery re-refined nearly 150,000 gallons of used oil in 1976. Cenex Oil Company blends waste lubrication oils with virgin stock in its refinery and uses approximately 8,400 gallons a week. Both plants are supplied by private haulers.

A program serving Montana could include storage facilities at strategic locations where used oil can be collected and then transported to re-refining plants. Estimated figures indicate that the average cost to transport and process the used oil would be about \$.50 per gallon and the current market price is \$1.00 per gallon.

Implementation of such a program would require state, county, city, public and private support. However, the state can help promote such a program by requiring all state owned vehicles to use reclaimed lubrication oil and prohibiting disposal in dumps, sewers or streams. The Bureau believes such a program should involve the private sector for transporting used oil, the actual re-refining and marketing the reclaimed resource.

The Bureau is continuing to study application of such a program as a part of its goal of providing factual, detailed information to agencies and local governments concerned with solid waste management.

State Department of Health
and Environmental Sciences
Helena, Montana 59601

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